



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,592	05/23/2001	Steven R. J Pearl	MCA-433 PC/U	9295
25182	7590	11/07/2003	EXAMINER	
MILLIPORE CORPORATION 290 CONCORD ROAD BILLERICA, MA 01821			KIM, SUN U	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 11/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

45

Office Action Summary	Application No.	Applicant(s)	
	09/807,592	PEARL ET AL.	
	Examiner	Art Unit	
	John Kim	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2003 and 04 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 19-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>080803</u> | 6) <input type="checkbox"/> Other: |

Art Unit: 1723

1. The oath or declaration is objected. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is objected because:

Declaration filed 6/11/03 identifies the specification as filed on 5/23/01 and claims the benefit under 35 USC 119(e) of U.S. Provisional application no. 60/112,647 filed 12/17/98. However, according to the original declaration filed 5/23/01, the specification was filed on 12/17/99 suggesting the filing date of PCT/US99/30141 which claims the benefit of U.S. Provisional application no. 60/112,647 filed 12/17/98. According to the record, it is believed that instant application was filed as a 371 of PCT/US99/30141 and the benefit to the filing date of U.S. Provisional application no. 60/112,647 would be granted with new declaration stating such. If applicant believes this is not so, applicant should indicate as so in the declaration and the benefit to U.S. Provisional application no. 60/112,647 filed 12/17/98 would be removed since it was filed more than one year prior to the instant application.

2. The disclosure is objected to because of the following informalities:

Newly added recitation for claiming the benefit of U.S. Provisional Pat. App. Ser. No. 60/112,647, filed December 17, 1998 at page 1, line 7 should be revisited with examiner's comments on the oath as described above.

Appropriate correction is required.

3. The drawings filed on 5/23/01 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

4. Information disclosure statement filed 8/8/03 has been considered by the examiner.

5. Amendment filed 6/11/03 indicates that claims 16-17 are canceled and, at the same time, claim 16 is still presented. For the purpose of examination, amended claim 16 will be examined in this office action.

Art Unit: 1723

6. Claims 1-11 and 19-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the amendment filed on 10/29/02.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 12-16 and 18 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent No. 5,626,758 (hereinafter referred to as Belfort). Belfort teaches a multi-layered coil hollow fiber bundles designed to provide a specific performance output to create Dean vortices when subjected to a certain velocity wherein performance depends on the hollow fiber's inner and outer diameters, number of fibers, inherent angle of coiling and length of fibers and diameter of rod and inherently the length of rod which fibers are coiled and minimization of gaps between fibers to maximize the packing density of the fibers and above variables are calculated and manipulated to design coiled hollow fiber bundle that provide a specific performance output to create Dean vortices (see figures 1-2, 4-5, 7-15; col. 3, line 42 – col. 6, line 21). Belfort teaches that a multiple coiled layers of hollow fibers as shown in figure 14 and that the Dean vortex flow of the invention not only has similar advantages as Taylor vortex and oscillating flows but also is amenable to scale-up (see col. 2, lines 30-32). Claims 12-16 and 18 essentially differ from Belfort in reciting that Dean vortices are generated in the hollow fiber in both first and second

layers and both first and second layers perform substantially equivalently along a predetermined performance parameter. It would have been obvious to a person of ordinary skill in the art to utilize the guideline in Belfort to calculate variables and manipulate to design multiple coiled hollow fiber bundles that provide a specific performance output to create Dean vortices in both layers that perform substantially equivalently along a predetermined performance parameter such as flow rate.

9. Applicant's arguments with respect to claims 12-16 and 18 have been considered but are moot in view of the new ground(s) of rejection. Applicants argue that "without the benefit of applicant's algorithms -- described herein for the first time -- it remains equally questionable whether anything worthwhile could have been accomplished. It is submitted that this connection, combined with the mathematical enablement thereof, rises to the level of invention". However, such algorithms are not claimed in the method. Furthermore, applicants do not claim "linear scalability" that the coiling is conducted with an eye towards the accomplishment of "substantially equivalent performance" in each coil layer.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


11. This application contains claims 1-11 and 19-25 drawn to an invention nonelected with traverse in the amendment filed on 10/29/02. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kim whose telephone number is (703) 308-2350. The examiner can normally be reached on weekdays from 7:00 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (703) 308-0457. The fax phone number for official response is (703) 872-9306.

When sending a draft amendment by fax, please mark the paper as "DRAFT"; otherwise, mark the paper "OFFICIAL". This will expedite the processing of the paper.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.


John Kim
Primary Examiner
Art Unit 1723

J. Kim
October 31, 2003